

8/57
DATE

TO: TSS

BUILDING

ROOM NO.

REMARKS:

Please note #185
in particular. This indicates
lack of organization and logistic
support - Re - our conversation
this date.

50X1



Pls. return to [redacted] files.

FROM: [redacted]

BUILDING

ROOM NO.

EXTENSION

SECURITY INFORMATION

11 December 1951

MEMORANDUM FOR THE RECORD

SUBJECT: Field Marking Equipment (Drop
Zone and Night Landing)(RDP-60)

1. Abstract - This memorandum explains what transpired as a result of the EE requirement for adequate drop zone marking equipment, placed with RDD on 4 December 1951. It points out some deficiencies in the procedure of getting operational problems from the operating people to RDD.

2. On Tuesday, 4 December 1951, [] EE RDAB representa-50X1
tive, met with the undersigned and posed the following current operational
problem: Personnel losses have been severe in operations involving the
night landing of aircraft for delivery of personnel and equipment: bonfires
and AN/URC-4 transceivers are used in marking the zone. [] 50X1
was informed of the status of the special ultraviolet landing system
utilizing fluorescent autocollimators which has worked satisfactorily in
preliminary operational tests. He was also informed that immediate action
would be initiated to determine whether or not and when this system could
be provided for operational use. The action was initiated that same day
in the following

a. Acting Chief, RDD/TSS, was informed of the problem and asked
whether it could be ascertained that an urgent priority should be as-
signed to this problem. He could not contact the Chief, EE Division,
at the time, but directed that action should be given all possible
impetus, since RDD had an established project, approved 10 October
1951, (although not with such a priority) to provide such equipment.

b. On Wednesday, 5 December, [] Procurement, was con- 50X1
tacted and asked to telephone, through a cut-out, to Gordon Enter-
prises, 5362 North Cahuenga, North Hollywood, California,--a war sur-
plus dealer who had autocollimators on hand on 1 October 1951--to de-
termine whether any autocollimators could be purchased. It was dis-
covered that this dealer had sold and shipped them to England the
week of 26 November. The dealer said he thought he could get more.
He will call back the week of 17 December.

c. [] ARC Wing Headquarters, who has been closely 50X1
following the Air Force development of the ultraviolet-autocollimator
landing system, was contacted on 5 and 6 December to investigate the
availability of necessary equipment and the reliability of the system.

He reaffirmed

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He reaffirmed the reliability, stating that the autocollimators could be seen from 1,000 to 2,000 yards away when activated by the ultraviolet lamp of the aircraft and that good depth perception permitted night landing. He said there are 45 autocollimators at Mountain Home, of which a quantity could probably be made available for emergency operations. He stated that a [] 50X1 could install the BH-6 or AH-8 ultraviolet lamps, and associated power equipment, in the aircraft. He said that it would be possible for [] to write up specifications for doing the work but recommended that either the work be done at [] 50X1 or by someone who witnessed such an installation being performed. [] offered to introduce [] 50X1 Applied Physics Branch, as a consultant to ARC Wing Headquarters, to [] in order to explore these possibilities. 50X1

d. By noon of Thursday, 6 December, it was felt that in a matter of weeks autocollimators could be made available and that facilities for installing, or training a technician to install, the aircraft equipment could be provided for implementing the night landing operations. It was also evident that a more elaborate program could be shortly underway for providing smaller and better autocollimators and a standard ultraviolet light installation in the aircraft.

3. On Thursday morning, 6 December, [] APB, reported this progress to AC-RDD/TSS. Since the work involved in getting this program in motion required at least a week of concentrated effort, it was felt that an affirmation of urgency should be obtained from the Chief, EE Division. The Chief, Acting Chief, and RDAB member of EE Division could not be reached, but [] EE-1, was discovered to be the one who originally had the problem and was asked to give the details of it and the priority which should be assigned to it. [] stated that there was no present requirement for landing an aircraft at night and that the operational difficulties experienced were in dropping personnel and equipment at drop zones. He did not feel, however, that the project should have a triple-A priority since, except for resupply, the operations would be discontinued until spring. The system now being used for marking the drop zone is simply small fires for location and flashlights laid on the ground in the form of an arrow for giving dropping directions. The pilot has been having very great difficulty in locating the zone, usually circling over the area about eight times before being able to drop his load. Consequently, the area is well alerted, and the personnel are captured almost as fast as they land. Another great difficulty seems to be that it is almost impossible for a dropped person to locate supplies if dropped with another parachute. 50X1

4. Since the problem of night dropping is radically different from that of night landing, another solution to the problem was required. Mr. [] proposed the use of an infrared beacon. For this purpose he proposes to use a Welshback mantle gasoline lamp, feeling that a storage battery is a very poor way, by comparison, of supplying the energy for the light and that power in the form of gasoline is more readily available. 50X1

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He will

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He will investigate and expedite, if possible, the procurement of these lamps and the necessary infrared filters. Although the ultraviolet system could possibly be of some value in this operation, the aircraft equipment required would probably violate the sterility of the aircraft being used.

5. It seems evident from the foregoing discussion that planners of the operation did not avail themselves of the technical assistance at hand. The original problem, with its actual requirements, was not accurately transmitted through channels. The requirement should have been received by RDD/TSS long before it actually was. A formal request, with a clear indication of the priority which should be assigned, should have come from the Division Chief. It seems apparent that there exists either a lack of education of operational personnel as to the capabilities of RDD or a lack of proper procedure by which operational personnel could effectively get their requirements to RDD.



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Applied Physics Branch
Research & Development

DLC/ncc

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